

Department of Legislative Services
 Maryland General Assembly
 2020 Session

FISCAL AND POLICY NOTE
 First Reader

House Bill 589 (Delegate Charkoudian, *et al.*)
 Environment and Transportation

Solid Waste Management - Organics Recycling and Waste Diversion - Food Residuals

This bill requires certain generators of large quantities of “food residuals” to separate the food residuals from solid waste and ensure that the food residuals are diverted from final disposal in a refuse disposal system, as specified. The implementation timeline for this requirement is staggered, beginning January 1, 2021, based on the tonnage of food residuals generated by a person on a weekly basis. The Maryland Department of the Environment (MDE) must (1) establish guidelines to assist businesses with compliance and (2) develop mapping and other systems to identify existing composting facilities, as specified. The bill also establishes annual reporting requirements for MDE.

Fiscal Summary

State Effect: General fund expenditures increase by \$209,300 in FY 2021. Future years reflect annualization and ongoing costs. As early as FY 2021, State expenditures (multiple fund types) may increase to dispose of food residuals. Revenues are not directly affected.

(in dollars)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	209,300	178,500	147,300	141,000	145,600
GF/SF/FF Exp.	-	-	-	-	-
Higher Ed Exp.	-	-	-	-	-
Net Effect	(\$209,300)	(\$178,500)	(\$147,300)	(\$141,000)	(\$145,600)

Note: () = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; (-) = indeterminate decrease

Local Effect: Local revenues may be affected due to diverting food residuals from landfills to alternative disposal options. Local food disposal costs may increase. **This bill may impose a mandate on a unit of local government.**

Small Business Effect: Meaningful.

Analysis

Bill Summary: “Food residuals” means material derived from the processing or discarding of food, including pre- and post-consumer vegetables, fruits, grains, dairy products, and meats.

A person who generates food residuals must separate the food residuals from other solid waste and ensure that the food residuals are diverted from final disposal in a refuse disposal system by (1) reducing the amount of food residuals generated; (2) donating servable food; (3) managing the food residuals in an on-site system; (4) providing for the collection and transportation of the food residuals for agricultural use (including for use as animal feed) or for processing in an organics recycling facility; or (5) engaging in some combination of those waste diversion activities.

The food residual diversion requirements only apply to a person who (1) meets specified threshold amounts of food residuals generated and (2) generates the food residuals at a location that is within a 30-mile radius of an organics recycling facility that has the capacity to, and is willing to, accept and process the food residuals for recycling. The diversion requirements apply (1) beginning January 1, 2021, for a person who generates at least two tons of food residuals each week; (2) beginning January 1, 2022, for a person who generates at least one ton of food residuals each week; (3) beginning January 1, 2023, for a person who generates at least one-half ton of food residuals each week; and (4) beginning January 1, 2024, for a person that generates at least one-quarter ton of food residuals each week.

By December 1, 2021, and annually thereafter, MDE must report to the General Assembly on the bill’s implementation, including the impacts on waste diversion in the State.

Current Law/Background:

Broad Overview of Waste Management and Recycling in the State

The solid waste infrastructure in Maryland consists of both permitted and nonpermitted facilities, and solid waste is managed through a combination of recycling, composting, landfilling, energy recovery, and exporting for disposal or recycling. Maryland Recycling Act (MRA) serves as the primary law governing waste diversion in Maryland. It requires each county and Baltimore City to recycle either 20% or 35% of its waste depending on population size. Recycling of organic materials, such as composting of yard trimmings and food residuals, counts toward counties’ MRA recycling rates.

Yard Waste, Food Residuals, and Other Organic Materials Diversion and Infrastructure Study Group

Chapter 384 of 2017 required MDE to study and make recommendations regarding the diversion of yard waste, food residuals, and other organic materials from refuse disposal facilities in the State, including ways to encourage investment in infrastructure and to expand capacity for yard waste, food residuals, and other organic materials diversion. MDE published the required [report](#) in July 2019. The report indicates that in 2016, organics were the second largest component of waste disposed of in Maryland (next to paper), accounting for approximately 24% of the municipal solid waste disposed. Eighteen percent of the waste disposed of, or an estimated 713,257 tons, was food scraps. The study group worked with the Johns Hopkins Center for a Livable Future to determine the number and locations of “large food scraps generators,” which was defined as a generator that produces 52 tons of food scraps annually. According to the Center for a Livable Future, there are approximately 3,961 large food scrap generators located across Maryland.

Composting

Composting is the biological decomposition of organic matter under controlled thermophilic aerobic conditions (growing best in a warm environment). Regulations establish the permitting requirements for constructing and operating composting facilities in the State. In spring 2016, MDE created a general permit for composting and has begun to issue permits for such facilities. The general permit allows for an easier and more streamlined application and permit process to promote composting in the State.

According to MDE’s website, as of 2020, 18 composting facilities are operational, and three additional permits have been issued for planned facilities. Of the 18 facilities, 13 compost yard waste, 3 compost both food and yard waste, 1 composts food waste and manure, and 1 composts hay, straw, and manure. MDE advises that in 2018, approximately 161,000 tons of food scraps were composted out of an estimated 921,000 tons of food generated in Maryland.

Anaerobic Digestion

The U.S. Environmental Protection Agency (EPA) indicates that anaerobic digestion is the natural process in which microorganisms break down organic materials. Materials that are generally considered “organic” and can be processed in a digester include (1) animal manures; (2) food scraps; (3) fats, oils, and greases; (4) industrial organic residuals; and (5) sewage sludge (biosolids). “Digestate” is the material that is left after the anaerobic digestion process and can be made into products including soil amendments and fertilizers. According to EPA, digestate can be directly land applied and incorporated into soils to

improve soil characteristics and facilitate plant growth and can also be further processed into products that are bagged and sold in stores.

According to the July 2019 report referenced above, in 2016, Maryland had three active anaerobic digestion operations. There are also two planned operations and one inactive operation being upgraded. There are nine wastewater treatment plants in Maryland that have anaerobic digesters that process sewage materials. However, the current design of these anaerobic digesters would need to be upgraded to process food residuals. Therefore, digesters at wastewater treatment plants can only be viewed as potential organic materials diversion infrastructure.

State Expenditures:

Maryland Department of the Environment – Administrative Costs

General fund expenditures for MDE increase by \$209,314 in fiscal 2021, which accounts for the bill’s October 1, 2020 effective date. This estimate reflects the cost of hiring two permanent environmental compliance specialists and one contractual environmental compliance specialist to perform outreach, develop the required guidelines and map, respond to complaints and conduct other enforcement activities, and submit the required annual report. It includes salaries, fringe benefits, one-time start-up costs, and ongoing operating expenses. The information and assumptions used in calculating the estimate are stated below:

- although only a small number of food scrap generators are likely affected by the bill initially, additional composting and anaerobic digestion facilities will likely be established over time as the demand for food residuals recycling increases;
- at some point, potentially thousands of food scrap generators are subject to the bill’s requirements; and
- the responsibilities under the bill cannot be absorbed with existing staff.

Permanent Positions	2
Contractual Position	1
Salaries and Fringe Benefits	\$131,240
Purchase of Two Vehicles	54,000
Other Operating Expenses	<u>24,074</u>
Total FY 2021 MDE Administrative Costs	\$209,314

Future year expenditures reflect full salaries with annual increases and employee turnover and ongoing operating expenses. Future year expenditures also reflect termination of the contractual employee in fiscal 2023.

This estimate does not include any health insurance costs that could be incurred for specified contractual employees under the State's implementation of the federal Patient Protection and Affordable Care Act.

Potential Food Residual Disposal Costs for State Agencies

State expenditures (multiple fund types) may increase significantly for State facilities that generate large quantities of food scraps and must separate food waste, identify alternative methods of disposal, and ensure that food residuals are diverted from final disposal in a refuse disposal system under the bill. The impact for any affected facility depends on the amount of food waste generated, the location of the facility in relation to an organics recycling facility, whether a facility already separates food waste, and the availability of cost-effective disposal options. Affected facilities may include universities and colleges, correctional facilities, hospitals, and cafeterias. As larger numbers of entities are subject to the bill's diversion requirements, an increase in alternative disposal facilities likely results, which could reduce compliance costs.

For example, the University System of Maryland advises that costs for the University of Maryland, Baltimore Campus (UMB) could increase by several hundred thousand dollars annually. On the other hand, UMB estimates that costs to compost food scraps increase by an average of \$11,328 annually.

Local Revenues: The bill may result in a decrease in revenues for locally owned refuse disposal systems, such as landfills and resource recovery facilities, due to a decrease in the amount of material discarded in landfills. Landfills are funded in significant part through the payment of tipping fees. On the other hand, revenues may increase for locally operated composting and anaerobic digestion facilities from increased business and the sale of compostable material. For example, Prince George's County has extensive infrastructure in place to accept food residuals and anticipates an increase in revenue from processing out-of-county food residuals.

Local Expenditures: Similar to the impact described above at the State level, there could be a potential significant increase in local expenditures to dispose of food residuals outside of traditional landfills for local entities such as local correctional facilities, hospitals, schools, and cafeterias.

Local governments may also benefit to the extent that any increase in the diversion of food residuals from landfills assists counties in meeting their mandatory recycling rates under MRA.

Small Business Effect: Similar to the local and State impacts discussed above, small businesses that generate qualifying amounts of food residuals and are subject to the bill's

diversion requirements may incur additional costs to separate, collect, and process food residuals.

Businesses that operate composting or anaerobic digestion facilities, or those that collect or transport food residuals, benefit from an increase in demand under the bill. However, small business waste disposal companies that do not specialize in the handling of food residuals for nonlandfill processing may incur a loss of business.

Additional Information

Prior Introductions: None.

Designated Cross File: None.

Information Source(s): Baltimore City; Calvert, Montgomery, and Prince George's counties; Maryland Association of Counties; City of Annapolis; Maryland Municipal League; University of Maryland Medical System; University System of Maryland; Morgan State University; Maryland Department of the Environment; Department of Legislative Services

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